

Azeravtoyol OJSC



NON-TECHNICAL SUMMARY (NTS)

Azerbaijan: Dualisation of the Ganja-Gazakh-Georgian Border M-2 Road

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Abbreviations & Acronyms:

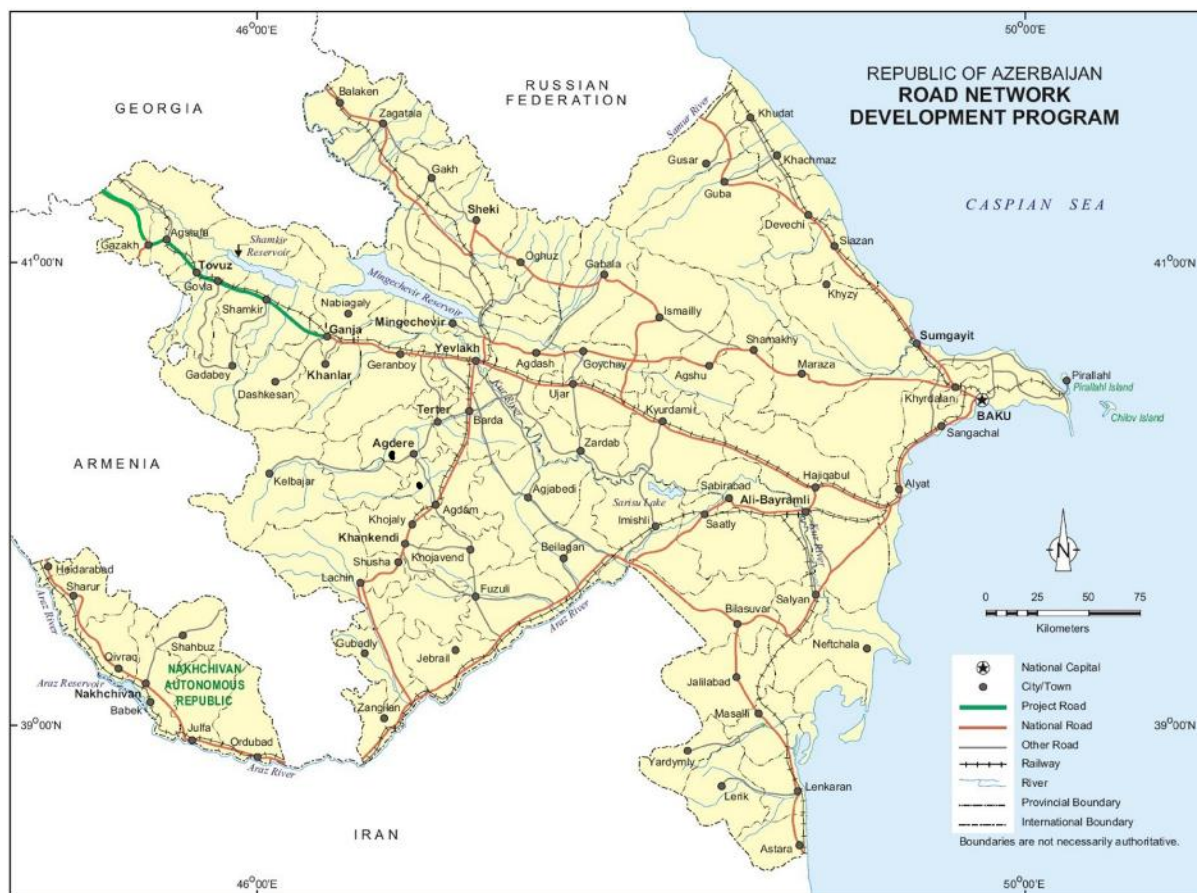
CESMP	Construction Environmental and Social Management Plan
EBRD	European Bank for Reconstruction and Development
EIA	Environmental Impact Assessment
E&S	Environmental & Social
ESAP	Environmental and Social Action Plan
ESP	Environmental & Social Policy
EU	European Union
km	kilometre, used to identify chainage (distance along road corridor) and length
IBA	International Bird Area
MENR	Ministry of Ecology and Natural Resources
NTS	Non-Technical Summary
OESMP	Operational Environmental and Social Management Plan
PR	Performance Requirement
RP	Resettlement Plan
RNDP	Road Network Development Program
RSA	Road Safety Audit
SEP	Stakeholder Engagement Plan

1. INTRODUCTION

The European Bank for Reconstruction and Development (EBRD) is considering providing financing to the Azeri state owned road agency - Azeravtoyol - in support of a project to implement improvement works to the stretch of the M-2 road corridor between Ganja and the Azerbaijani border with Georgia. The proposed improvement works include widening and/or realignment of an existing two-lane single carriageway road, to form a dual two-lane carriageway (i.e. four lanes) with central reservation.

The Project location is shown in **Figure 1**, extending from Ganja northwest to the border with Georgia:

Figure 1 Project Location



The EBRD has determined that the Project is a “Category A” Project according to its Environmental & Social Policy (ESP 2014), and is working with the Azeravtoyol to ensure that the Project’s environmental and social risks are appraised and managed in accordance with the Policy. An Environmental Impact Assessment (EIA) was conducted on the Project, which received approval from the Ministry of Ecology and Natural Resources (MENR) in 2015. The approval contained some conditions which are clearly stated, which will be addressed in the Environmental and Social Management Plans for construction. The land acquisition process is currently underway, and a **Resettlement Plan (RP)** is being developed to guide and document this.

This **Non-Technical Summary (NTS)** describes the Project, and summarises the findings of the environmental and social investigations conducted and the risks identified. A **Stakeholder Engagement Plan (SEP)** has been developed for the Project describing the planned stakeholder consultation activities and engagement process. An **Environmental and Social Action Plan (ESAP)** has been prepared in relation to the proposed Project, in order to structure the future Project preparation activities to be in line with EBRD’s Environmental and Social Policy (ESP 2014). The key environmental & social (E&S) project preparation documents – the EIA, SEP, NTS, RP and ESAP -

will be uploaded to the Azeravtoyol website (<http://www.azeravtoyol.gov.az/az>) and the EBRD website when completed (<http://www.ebrd.com/home>).

2. PROJECT NEED & BACKGROUND

Project Need & Benefits

The Project is part of Azerbaijan's programme to upgrade the national road network, which aims to support the economic growth of regions outside Baku and to support international trade and regional cooperation. The M-2/E60 corridor is part of the 'Transport Corridor Europe-Caucases-Asia' (TRACECA), which connects Baku with Georgia, Turkey and Western Europe, the Russian Federation and Iran. The Ganja-Georgian Border stretch of this road is part of the Baku-Tbilisi route, and is also this region's primary local traffic distributor road, connecting the towns of Ganja, Shamkir, Tovus, Agstafa, and Gazakh with the other towns, villages and communities in the area. Its upgrade is important, as the current road network suffers from poor safety standards and a higher than average accident rate, with head-on collisions noted as a key concern for this road section. The local economy is heavily dependent on agriculture and an improved road network is essential for this sector.

The Project will deliver a number of key benefits. The increased traffic capacity will accommodate the forecasted growth in international and national traffic along the route. The improved transport connections and reduced journey times will help stimulate economic growth in Azerbaijan and the neighbouring countries. The Project will provide a significant improvement in road safety conditions. Dualisation should reduce the risk of head-on collisions during overtaking. The separation of local agricultural traffic (e.g. tractors, etc.) from heavy vehicle and regional traffic will also improve road safety.

The provision of bypasses on some route sections will also reduce the levels of traffic emissions and noise in the communities where the road currently passes through the urban areas. This will improve both living conditions and community safety for the local population.

Project Development & Planning History

The Ministry of Transport (MOT) initiated the 'Road Network Development Program' (RNDP) in 2006, with the aim of achieving a safe, efficient and sustainable modern road network that promotes economic and social development. A key part of the RNDP was the upgrading of certain major international routes to a dual 2-lane standard. The RNDP was structured into tranches, and originally the dualisation of the M-2 road between Ganja and the Georgian Border was part of the second tranche, to be financed by the Asian Development Bank (ADB).

Under the ADB assistance programme, the Project was originally structured into 2 separate sections. The first section running from the end of the Ganja bypass to Gazakh and second from Gazakh to the border with Georgia. Detailed design documentation was produced for both sections in 2012, which included a full set of drawings and a Specification for the construction contract. An EIA for each road section was also completed at this time.

However, ADB withdrew from funding the second tranche of the RNDP. The Islamic Development Bank (IDB) first considered, then decided against financing the scheme. In 2014, after direction from the Ministry of Ecology & Natural Resources (MENR), a decision was made to undertake the dualisation works as one 'Project'. The EIAs were combined into one EIA for the entire Project. This was submitted to the MENR, which issued an expert opinion on 16 September 2015 expressing non-objection to the Project with a few conditions. Currently, the EBRD is considering financing the Project.

3. PROJECT DESCRIPTION

Description of Project

Figure 2 below is a schematic of the existing road, with the main towns and built up areas shown and the proposed Project. The red line indicates the current M-2 carriageway, which passes through several of the towns.

The schematic is not to scale. The current road is a 2-lane single carriageway road, with one lane in each direction, and no central reservation/separation. It is around 15 m wide.

The improvement works which make up the Project include the widening of some stretches of the existing carriageway, and construction of some new sections of road that will bypass the main urban areas along the route. The bypass sections are needed where it would be too difficult to widen the existing road through the urban areas. The type of improvement works planned for each stage are shown in **Figure 2**. The works will convert the road into a dual carriageway, with two lanes in each direction, and a central reservation. The new dual-carriageway will be 27.5 m wide, allowing room for two traffic lanes and a hard shoulder of 3.75 m in each direction, as well as a central reservation of 5 m.

A total of 58.65 km of the existing road will be widened in situ, parallel to the existing road. For some stretches, widening will be carried out on one side of the road by building a new 2-lane carriageway parallel to the existing road, directly adjacent to it. For other sections, the widening will be carried out on both sides, with one new lane added to each side of the road. The new Tovus bypass will be widened in this way, along a 9 km stretch. For one 2.8 km section near the Georgian Border, a stretch of new dual carriageway (with 4-lanes, 2 in each direction) will be constructed parallel to the existing road, with the existing road remaining as it is, so it can act as a service road providing local access to the existing roads in the area.

In addition, there will be six sections of completely new dual-carriageway, which will take the M-2 road around the towns of: Shamkir, Asagi Ayubulu, Agstafa/Gazakh, Yukhari Salahli, and I Shikhli. Also, a short stretch of the new carriageway will be created beside the current road, to allow for a new junction near Konulli. Together, these sections have a total length of approximately 71.5 km. For the construction of these bypasses, a strip of land of 60 m wide will be required to allow for embankments and contractor access.

Table 1 below provides more detail on what the works consist of in each section. The six maps in **Annex 1** show the new road alignment in more detail.

Figure 2 Schematic of Ganja to Gazakh to Georgian Border Dualisation Project

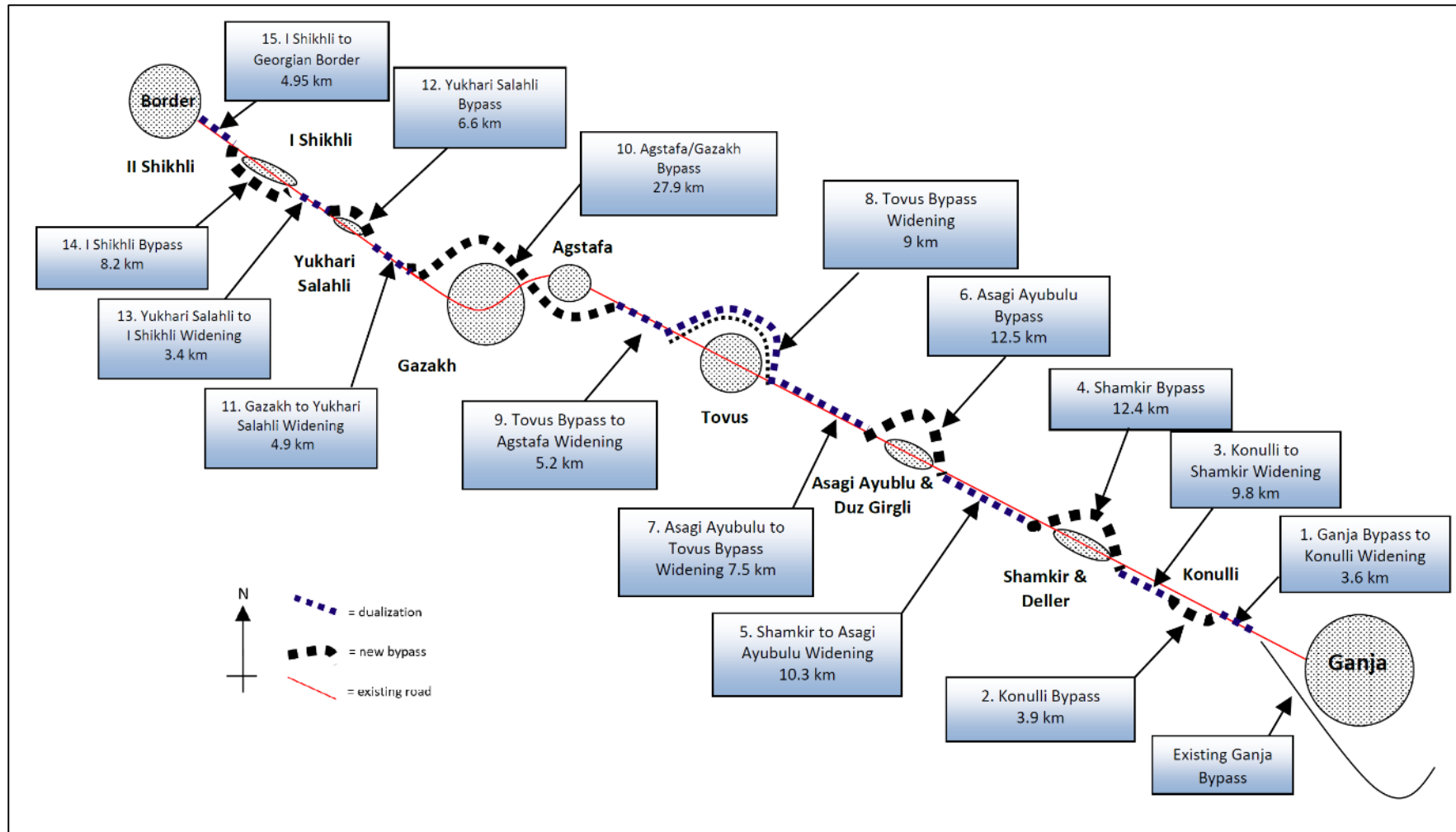


Table 1 Summary of Improvement Works

Section No.	Section Name	Parallel Widening or Bypass & Description (including land use)	Chainages	Length of Widening km	Length of Bypass km
1	Ganja Bypass to Konulli Widening	Parallel Widening – widening to the north of the existing road for a few kilometres then to the south for a short stretch. Runs from the Ganja bypass through agricultural cultivated land and some grazing land.	0+000 km to 3+600 km	3.6 km	-
2	Konulli Bypass	Bypass – bypass to the south of the existing road to accommodate local access and avoid demolishing additional residential structures. A few structures will be affected including near the eastern end of the bypass.	3+600 km to 7+500 km	-	3.9 km
3	Konulli to Shamkir Widening	Parallel Widening – widening mainly to the south of the existing road with widening on both sides in a few locations. Runs generally through agricultural cultivated land and some grazing land. Section crosses the Shamkir River.	7+500 km to 17+300 km	9.8 km	-
4	Shamkir Bypass	Bypass – bypass to the north of the existing road and the settlements of Deller and Shamkir, and running south of Dashbulag. Bypass mainly runs through agricultural cultivated land, and a few residential houses are affected on the north of Deller.	17+300 km to 29+700 km	-	12.4 km
5	Shamkir to Asagi Ayubulu Widening	Parallel Widening – widening along this stretch comprises of stretches to the north and south of the existing road with some widening on both sides. Section generally runs through agricultural cultivated land.	29+700 km to 40+000 km	10.3 km	-
6	Asagi Ayubulu Bypass	Bypass – bypass to the north of the existing road and the settlements of Asagi Ayubulu and Duzgirli. Bypass mainly runs through agricultural cultivated land and crosses the Zeyem River.	40+000 km to 52+500 km	-	12.5 km
7	Asagi Ayubulu to Tovus Bypass	Parallel Widening – widening mainly to the north of the existing road. Runs generally through agricultural cultivated land which includes vineyards and glasshouses/poly tunnels, and past a few roadside businesses, including petrol stations and a cafe.	52+500 km to 60+000 km	7.5 km	-
8	Tovus Bypass Widening	Parallel Widening – widening mainly to the north of the existing Tovus Bypass road. Section crosses the Tovus River with a 300 m bridge and then generally through agricultural land. A few structures will be affected where this section joins the main alignment.	60+000 km to 69+000 km	9 km	-
9	Tovus Bypass to Agstafa Widening	Parallel Widening – widening along this stretch consists of stretches to the north and south of the existing road, with some widening on both sides. Section generally runs through cultivated land and cultivated forest, and past some isolated buildings.	69+000 km to 74+200 km	5.2 km	-
10	Agstafa/Gazakh Bypass	Bypass – bypass running to the north of Vurgun, south of Agstafa and continuing to the north of Gazakh/Dagh Kaseman. Bypass route selected to avoid resettlement and run as far as possible through agricultural land. Section crosses a few rivers.	74+200 km to 102+100 km	-	27.9 km
11	Gazakh to Yukhari Salahli Widening	Parallel Widening – widening mainly to the north of the existing road with widening for a few hundred metres to the south. Runs through some agricultural cultivated land before mainly running through an area of more natural habitat/grazing land.	102+100 km to 107+000 km	4.9 km	-
12	Yukhari Salahli Bypass	Bypass – bypass to the north of the existing road and the settlement of Yukhari Salahli. Bypass mainly runs through agricultural cultivated land and a petrol station may need to be demolished at the junction at the end of this stretch.	107+000 km to 113+600 km	-	6.6 km
13	Yukhari Salahli to I Shikhli Widening	Parallel Widening – widening along this stretch consists of stretches to the north and south of the existing road with some widening on both sides. Section generally runs through agricultural cultivated land and some small vineyards. The section crosses the Injichai River.	113+600 km to 117+000 km	3.4 km	-
14	I Shikhli Bypass	Bypass – bypass to the south of the existing road and the settlement of I Shikhli. Bypass mainly runs through agricultural cultivated land with some grazing land, a few isolated residential and other structures may be directly affected by the route.	117+000 km to 125+200 km	-	8.2 km
15	I Shikhli to Georgian Border	Parallel Widening – widening along this stretch includes stretches to the north and south of the existing road with some widening on both sides. A bypass will take the road north of I Shikhli, leaving the existing road as a service road for local access. Outside the settlements this road generally runs through cultivated land. A few structures will be directly affected, including petrol stations and a roadside restaurant.	125+200 km to 130+150 km	4.95 km	-
Total Lengths (km) (Parallel Widening/Bypass)				58.65 km	71.5 km
Total Overall Project Road Length (km)				130.15 km	

As well as the road carriageway itself, the Project includes other important infrastructure. There will be **22 new interchanges**, of which 18 are major grade-separate interchanges which have slip roads to provide junctions with existing roads. There will be **four flyovers** created to carry local roads over the Project road. Several **slip roads** will be created to allow access to the new dual-carriageway from local roads. **Ten underpasses** will be formed to take local roads underneath the new carriageway, complete with slip roads to provide access to the Project road. Approximately **44 additional underpasses without slip roads**, will be created to allow local roads to pass under the new dual carriageway, but these will provide no connection to the Project road. **Five flyovers** will carry local roads across the Project road without connection to it. A **roundabout junction** will be provided near the Georgian Border. Some **bridge structures** will be widened, and a number of **new bridges** will be built adjacent to existing ones, to carry the widened carriageway section. **Eleven new bridges** will be constructed to carry the new road over watercourses. Smaller watercourses will be carried under the road by **culverts**. The Project road will be equipped with **three rest areas**, and approximately **28 bus stops**.

This infrastructure has all been designed in detail, and detailed drawings have been prepared as part of the Project documents.

Road Safety

Road safety along the current road is poor, with a high overall accident rate and very high fatality rate. The move to a dual carriageway will reduce the overall accident risk, including reducing the risk of head-on collisions which seem to have contributed to the very high fatality rate on the existing road. The creation of bypasses will remove the heavy through traffic from passing through towns, villages and built up areas, which will help reduce community and road safety risks, noise and congestion in these areas. The new widened road will be able to operate at higher speeds and direct access from side roads/tracks etc. by the community will not be allowed. Pedestrians will also not be allowed to cross the road directly. Awareness raising activities with the local communities will be undertaken prior to the road opening, with the purpose of discouraging direct crossing of the road and direct accessing of the new road with agricultural/other vehicles. A Road Safety Audit will also be undertaken on the current design to consider the need for additional safety measures.

Project Schedule & Construction Workforce

The Project schedule and current workforce estimates are indicated below – these are estimates at this time (April 2016) and may be subject to change depending on procurement and other ongoing activities, such as land acquisition:

- Azeravtoyol currently intends to commence construction in Quarter 3 2017. The anticipated construction period for the works is 3 years, meaning the full Project road should be in operation by Quarter 3 2020 assuming works commence in Quarter 3 2017.
- Timing will partially depend upon the procurement strategy as to the number of construction lots/packages the Project will be structured into. Currently, Azeravtoyol is considering potentially splitting the Project into separate contracts for 2 route sections, however this is still under review.
- The EIA refers to a construction workforce of between 300-500 workers. This will depend upon the procurement strategy for the works. If the Project is split into 2 contracts the peak number of workers would potentially increase and could be closer to 800 at peak times. It is expected that the Contractor may establish one or two construction laydown camps along the route and that some worker accommodation may be located in these camps. However, Azeravtoyol anticipates that most workers will find accommodation in the local towns and villages along the route.

4. ROUTE SELECTION & CONSIDERATION OF ALTERNATIVES

Several alternatives to the proposed Project route were considered during its development. These are summarised below:

Route Concept - Road Widening Versus New Dual Carriageway: The simple option of parallel widening of the existing road in its entirety, would have been the basic option for improvement. However, in several of the urban areas, widening of the existing road would have required significant demolition of buildings and increased noise and air quality problems and would have significantly increased the accident risk in those areas. Bypasses were therefore designed around the main built up areas, and this solution provided the best balance between reducing land take and resettlement, and improving road safety and reduced congestion.

Alternative Alignments for the Asagi Ayubulu Bypass: A longer bypass running to the south of the existing road was considered. However, this would need to be around 22 km long to avoid all existing developments and the airstrip, and would have required additional land and materials, with additional environmental effects. This alternative was ruled out, and the current 11.5 km route was chosen.

Alternative Alignments for the Gazakh/Agstafa Bypass: Eight possible alternative alignments were examined, which would take the road around the Gazakh and Agstafa built up areas. These were evaluated according to a weighted scoring system which took into account of: cost; road safety; loss of buildings/houses; loss of agricultural land; effects of noise and air quality; severance and visual impact. This analysis determined that the chosen route would require considerably less cut and fill than the others, and would not cause as many access difficulties for the inhabitants of the towns and villages in the area, whose access to the main towns and to their agricultural areas needed to be retained. In addition, this route will provide additional relief from noise and air quality impacts in the built up areas, and further improve road safety.

Alternative Alignments for the I Shikhli Bypass: A longer bypass was considered, which passed farther to the south of the village than the chosen alignment, but had a more constant elevation with less need for earthworks. This option was also closer to the Armenian border. This was ruled out as the disadvantages of its longer length outweighed the advantages of the flatter elevation.

Not Providing an Interchange with the Konulli Access Road: Continuing the parallel widening of the existing M-2 road without providing an interchange with the road to Konulli village was considered. This would have required less land take, but the residents of Konulli village would have no access to join the carriageway at this point, and would require to travel around 4 km to the closest junction. This option was ruled out due to the need to maintain access to Konulli village.

Environmental and Social Effects of Alternatives

These alternatives were assessed and it was determined that the proposed scheme does not give rise to more significant environmental and social effects than the other alternatives considered. The proposed scheme provides the best balance between minimising impact on residential buildings, alleviating road congestion, reducing noise and emissions and improving road safety in built up areas, and the need to use agricultural lands for the new bypasses.

5. SUMMARY OF ENVIRONMENTAL & SOCIAL LEGAL & POLICY FRAMEWORK

National Legal Framework for Environmental and Social Protection

The environmental legal framework is defined by the Law on Environmental Protection (1999), together with some laws inherited from the Russian State Environmental Review (SER) system. With regard to the environmental assessment of infrastructure projects, the *Handbook for the Environmental Impact Process in Azerbaijan (1996)* is

routinely used. This is advisory rather than fully statutory, but it contains the main requirements of an EIA process. National laws exist which cover the protection of historical and cultural sites, protection of environmental resources such as flora, fauna and water quality. Laws on social issues include those relating to land acquisition, public health, and a labour code which deals with workers' rights, including occupational Health & Safety, labour relations, working conditions, employment, wages, rights of women workers. Azerbaijan has ratified the main International Labour Organisation (ILO) Conventions. Azerbaijan has also signed several international environmental and social treaties and conventions which are also applicable. The Project is governed by all these relevant laws and international obligations.

Summary of EIA & Permitting Process

The environmental impact assessment (EIA) process set out in the *Handbook for the Environmental Impact Process in Azerbaijan* closely resembles the internationally accepted EIA procedure and, although it is a non-binding document, it is applied to most projects in Azerbaijan. It includes a screening stage, stakeholder scoping of the issues and production of an EIA document which is then reviewed and disclosed. The EIA document must contain a description of the proposed project, a description of the environment, and an evaluation of the potential impacts. The process begins with a formal application to the Ministry for Ecology and Natural Resources (MENR), which then determines the scope of the assessment. If an EIA is deemed necessary, a meeting will be convened between MENR and the proponent to finalise the study scope. Following conduct of the study, the proponent submits the draft report to MENR for review and dissemination. The project is then either rejected or accepted by MENR, in the latter case usually with conditions placed upon the acceptance.

Legal Framework for Nature Protection

The *Law on Specially Protected Natural Areas and Objects (2000)* governs the designation and protection of specified natural areas and objects which have special ecological, scientific or aesthetic value. The Law sets various prohibitions and restrictions to activities, depending on the category of protected area. Activities with a potential negative impact on the environment are not allowed in State Natural Reserves, National, Natural and Ecological Parks and State Natural Forbidden Areas. With the exception of State Natural Reserves - the highest protection category - operations that have no negative impact on the environment may be allowed after approval by the MENR. The construction of buildings and installations (including roads) is prohibited in State Natural Reserves. There is a State Natural Reserve on the other side of the Kura River near to part of the road at Yukhari Salihli, and the type of habitats it protects are not found on the side of the river of the road scheme, so the assessment has determined that no adverse effects from the Project are expected.

Legal Framework for Land Acquisition

There are a number of laws and regulations which govern the 'Land Acquisition and Resettlement (LAR)' process for state projects in Azerbaijan. Key laws include: The Constitution of the Republic of Azerbaijan (1995); The Law on the Expropriation of Lands for State Needs (No. 987 III-Q 2010) – referred to as the '**Expropriation Law**'; The Land Code (1999); The Civil Code (1998); and various Decrees, a key one being the Decree of the President (No. 506-3 QD 2007) which stipulated a 20 % additional compensation will be added to market price for affected property.

Acquisition of land is being carried out under the **Expropriation Law (2010)** and to meet the requirements of the other parts of the Azerbaijan legal framework. The Expropriation Law was developed to meet the requirements of International Financial Institutions, which aim to compensate affected parties for lost land and assets, and restore or (where possible) improve livelihoods and the standards of living of people affected by land acquisition. Both affected people (and businesses) with legal and no legal rights and documentation for the land they live on and other assets they own are considered under the provisions in the Expropriation Law. The law allows first for acquisition of land through negotiated agreements and then if this fails, expropriation. Consultation with affected

parties is required during the land acquisition process under the law. There is also a process to enable affected people to raise grievances and issues during the process.

6. PROJECT EIA, STAKEHOLDER ENGAGEMENT & LAND ACQUISITION PROCESS

Environmental Impact Assessment (EIA) Process

Two separate EIAs were produced in 2012, one for the section from Ganja to Gazakh, and one for the section from Gazakh to the Georgian Border. These were produced in accordance with the *Handbook for the Environmental Impact Process in Azerbaijan*, as well as the requirements of the Asian Development Bank (ADB). The two EIAs were submitted to MENR, which provided a number of comments and requested a resubmission of the documents combined into one EIA for the entire Project. A combined EIA was produced, which included updates and revisions to address MENR's comments, and some concerns raised by local communities during consultations on the draft EIAs. The combined EIA was submitted to MENR in 2014. MENR gave a positive decision (dated September 2015), highlighting several specific issues which needed to be addressed in the Environmental and Social Management Plans to be developed going forward. This positive decision is considered to remain current and is effectively the environmental approval for the scheme.

The combined EIA (2014) contains an Outline Environmental Management Plan (EMP) which lists the actions that must be implemented to address the E&S risks and impacts identified. These are in outline form only and the Contractor will be required to prepare a comprehensive Construction Environmental and Social Management Plan (CESMP) to take into account the EIA requirements, and any other requirements identified by MENR and/or EBRD. This will be reviewed and approved by the Supervising Engineer for the construction works.

Stakeholder Engagement

The engagement activities with the public undertaken to-date are limited to engagement activities as part of the Ganja to Gazakh EIA and with respect to the on-going land acquisition process. Preliminary consultation meetings took place in February 2011, in the four Rayons in the Project area, as part of the Ganja-Gazakh EIA. Preliminary designs were presented as well as the preferred routes of the bypass sections and a summary of the E&S assessment for the bypass alignment options. Concerns from local residents related to the number of underpasses/overpasses and interchanges. The draft EIA for Ganja-Gazakh Road was then disclosed in public meetings in August 2012 in the same four locations. The project design was updated to take account of previous concerns and the final conclusions of the EIA were presented.

Public consultations still need to be held on the combined EIA for the whole Project from Ganja to the Georgian Border and to update the Public on the design and schedule for the Project.

Consultations have been ongoing with respect to the land acquisition process at Rayon and municipality level, also engagement has occurred during the land related census with Project Affected People. This process has progressed farther in the 3 Rayons of Shamkir, Tovus and Agstafa than in the Gazakh Rayon.

A Stakeholder Engagement Plan (SEP) has been prepared to identify key stakeholders and define relevant procedures and future plans for engagement prior to and during construction. Public disclosure of project documents including – the EIA, SEP, NTS and ESAP - will be uploaded to the Azeravtoyol website (<http://www.azeravtoyol.gov.az/az>) and the EBRD website when completed (<http://www.ebrd.com/home>). Meetings using this information at the Rayons (Shamkir, Tovus, Agstafa and Gazakh) with municipalities and local communities will be undertaken. The SEP includes appropriate methods of communication, some of which are targeted to assist the more vulnerable stakeholders participating in the process.

Engagement with local communities along the route specifically on the updated project schedule and infrastructure to retain access is also considered important. Consultations will clearly present where underpasses,

overpasses, junctions and local service roads are proposed so as to gain the understanding and support of local communities on the access to be provided in the Project.

Land Acquisition & Resettlement (LAR) Planning Process

Land will need to be acquired for the widening of the existing road corridor and the construction of the bypasses. Predominantly agricultural cultivated land will be affected, along with some small parcels of grazing land, vineyards and areas of greenhouse/poly-tunnels used for the production of vegetables. There are a number of settlements along the route of varying sizes. With careful route planning, selection of widening approach and the use of bypasses impacts on buildings have been minimised. However, a few houses, small local road side & other commercial businesses (e.g. petrol stations, cafes/restaurants etc.) and other business structures will be directly affected, some of which are abandoned. The majority of land is in private ownership with less than a quarter estimated currently to be Municipal land and a very small amount of State Land.

Expropriation of land is being carried out under the Law on Expropriation of Lands for State Needs (No. 987 III Q 2010) – referred to as the ‘Expropriation Law’ – and to meet the provisions of other relevant parts of the Azerbaijan legal framework. Azeravtoyol, as the ‘Executive Authority’ (EA), has overall responsibility for the land acquisition and resettlement planning, implementation and financing for the Project. The Land Acquisition Department (LAD) of Azeravtoyol is acting as the Expropriation Agency (ExA) and is organising the land acquisition and resettlement planning. In the Rayons, local governments do have certain roles and responsibilities in relation to land administration, along with certain national agencies. Therefore, in each affected Rayon of Shamkir, Tovus, Agstafa and Gazakh, a Land Acquisition & Resettlement (LAR) Commission has been established to aid inter-agency coordination and have oversight of key elements of the LAR process, such as the census and compensation rates.

A **Resettlement Plan** will be prepared for the Project that will indicate which households and businesses that will be affected by physical and economic displacement (e.g. for the loss of agricultural land) and what compensation and assistance they will be entitled to receive. Currently in each of the Rayons, data collection activities, including the census of persons and land affected, valuation of land and assets and consultation activities, are ongoing to inform compensation arrangements and enable the preparation of the Resettlement Plan.

A grievance redress mechanism has been established for the LAR process so that affected persons can raise issues and grievances. Details of this will be provided during the consultations in each of the Rayons and the contact details contained in this NTS can be used to access the grievance redress mechanism.

7. SUMMARY OF BASELINE ENVIRONMENTAL & SOCIAL CONDITIONS

Environmental Baseline

Setting, Landscape and General Conditions: The existing M-2 corridor lies in the extensive lowland plains between the Greater Caucasus Mountains and the Lesser Caucasus Mountains, in northwest Azerbaijan. The road runs southeast-northwest along the southern flank of the Kura River Valley, passing through predominantly agricultural lands. The river valley itself is quite flat. The current M-2 road passes through a number of towns and villages, with the land between largely turned over to cultivation - mostly of vines and fodder crops - interspersed by some pasturelands and some unused and fallow areas. The routes of the proposed bypasses – to the north and south of the current road - are mostly through cultivated agricultural lands.

The Project area has a dry and warm sub-tropical climate. Air quality outside the built up areas is good, with few polluting sources, although the industries and traffic in the towns along the route reduces this. Apart from traffic, there are no significant noise sources outside the towns and villages.

Geology & Water Resources: The Kura River is Azerbaijan’s main river and accounts for around 90% of the country’s surface water resources. The area lies mostly on sedimentary rock, covered by loose, sandy, gravelly river sediments which have been carried down by the rivers which drain the mountains to the north and south. As

it drains towards the Caspian Sea, the Kura feeds two major reservoirs - the Shamkir and the Mingechevir Reservoirs - which are used for power generation and irrigation. The water quality upstream of Ganja is reasonably good, but the river becomes polluted downstream of Yevlakh due to the wastewater discharged from the towns and villages.

Six mid-sized rivers and several smaller streams flow under the existing M-2 road, draining from the southern mountain areas into the Kura. These are fed by rainwater, groundwater, and water from snow melting. They contain a high proportion of pebble and gravel material, and suffer from extensive extraction of these aggregates from river beds. The rivers generally have high turbidity, and carry large amounts of sediment. They are very sparsely vegetated and flow varies from almost zero to flash floods.

Agriculture in the Project area is supported by surface water drawn from the local rivers and by pumping groundwater from the shallow aquifers in the area. Groundwater depth may reach 25 m in the region between the Shamkir and Agstafa Rivers, reducing to around 5 m near Tovuz and Agstafa. A large irrigation canal has also been established, which runs roughly parallel to the M-2 road, originating at a reservoir west of Gazakh and extending all the way to Dujarli.

Ecology & Biodiversity: The majority of the existing road and proposed bypasses runs through land that was converted for agricultural use many years ago, so practically no remaining natural habitat will be affected by the Project. The majority of flora in the area is crops, artificially planted trees and shrubs. Three Important Bird and Biodiversity Areas (IBAs) exist in the Project area – the *Akstafa-cay Valley IBA*, lies around 5 km north of the existing road. The *Shamkir Reservoir IBA* - which has a national designation of ‘State Nature Reserve’ according to the *Law on Specially Protected Natural Areas and Objects* - is located around 10 km north of the existing road. At the northern end of the Project corridor, the *Gayarazi Nature Sanctuary* has been established, which is also an IBA. This lies entirely on the north bank of the Kura river where it protects the wetland forest habitats in the area. However, the Project will not impinge on any of these protected areas, and the habitats which they protect are not found in the areas through which the road will pass. The protected areas will not be adversely affected by the road, provided the water quality in the Kura River is not compromised. According to the EIA, there are not known to be any endangered, or critically endangered fish or other aquatic species (i.e. those which appear on the IUCN Red List), in the Project area.

Social Baseline

The social context of the area varies between the urbanised towns and cities, to small villages and hamlets whose inhabitants work in farming.

Local Communities: Ganja is Azerbaijan’s second largest city and houses significant industry, including an aluminium processing works. Aside from Ganja, the main towns in the Project area are shown in the schematic in **Figure 2**, and include: Shamkir, Asagi Ayubulu, Tovuz, Gazakh, Agstafa, Yukhari Salihli, and I Shikhli. Many other smaller towns and villages exist along the road, testifying to the historic availability of the Kura River water system. The maps in **Annex 1** illustrate these settlements in more detail. The livelihood base of the Project area also varies, with industries, Government service, and service sector employment available in the larger towns. Outside of the towns, the area has a predominantly rural focus, with farming – cultivation of crops including grapes, tomatoes, fodder crops for livestock, cereals and animal pastoralism – as the key main livelihoods. There is some roadside service provision – cafes, restaurants, petrol stations, etc. – to the users of the highway. The larger towns and cities have more education and health care provision, with primary schools and smaller clinics serving the smaller centres.

Poverty reduction in Azerbaijan has been a key challenge of the Government. Poverty reduction programmes have greatly reduced those living under the poverty line during the last 15 years. However, there are regional variations and poverty reduction in urban areas has reduced faster than in rural areas, such as significant portions of the Project area.

In the wider Project area, approximately 42 % is an urban population, and 52 % being rural. Incomes in the Project area are dependent on agriculture. There is also a clear difference between national monthly salaries in Azerbaijan compared to the Project area. Based on 2010 data, the national average monthly salary was 331.5 AZN, while in the Ganja-Gazakh economic region it was 213.2 AZN - *under 65 % of the national average*. The average monthly salaries also vary over the route length, with average monthly salaries being 195 AZN in the Gazakh area - *under 60 % of the national average*. This indicates the low salary levels in the Project area and suggest the dependence of households on agricultural activities.

Land Use: As noted, outside of the towns and cities, the land use in the Project area is predominantly agricultural, with cultivated fields being one of the main features of the area through which the Project passes. Much of these are open, although there is significant use of greenhouses in parts of the route. Some fields were cultivated in the past, but are currently fallow or used to support cattle or sheep. Land immediately adjacent to the road is often semi-developed, with assorted buildings, services, pavements, and/or open ground yet to be developed. The roadside is commonly planted with lines of trees.

Cultural Heritage: There are numerous graveyards in the area, but the Project will not affect these. The vast majority of the new carriageway and new bypasses will run through land that has already been disturbed on the surface and the sub-surface, from either construction of the original road or from ploughing. The risk of disturbing an unknown site is therefore low.

8. ENVIRONMENTAL & SOCIAL BENEFITS, IMPACTS & MITIGATION MEASURES

During the EIAs, and the subsequent assessment process conducted by EBRD, the potential environmental and social benefits and adverse impacts were assessed. Assessment topics included: ambient air, water, noise and vibration, biodiversity & habitats; landscape; local communities, employment and livelihoods, access and severance, cultural heritage, community, health, safety and security (including road safety and emergency response) and labour and workforce issues.

The benefits of the Project are summarised below:

- **Economic Development:** The Project will potentially be beneficial to many aspects of the local economy. The road improvements are also expected to be beneficial to national and regional economic growth by improving transport corridors with economic centres in Azerbaijan and the neighbouring countries and markets. The improved corridor should accommodate the forecast growth in both international and national traffic.
- **Short-term Local Employment During Construction:** The Project could provide short-term opportunities for local employment during the construction period.
- **Road & Community Safety Improvements:** The move to a dual carriageway should reduce the very high accident numbers on this route, reducing the risk of head-on collisions which have contributed to the very high fatality rate on this road. The creation of bypasses will remove the heavy through traffic from the towns and built up areas, which will help reduce community and road safety risks, noise and congestion in these areas. Pedestrians will not be allowed to directly cross the road.
- **Reduction of Noise in Built-Up Areas:** The Project will reduce noise levels in urban areas by moving off the current road, onto the new bypass sections which will be outside the towns and villages. This will improve living conditions for those living near to the road.
- **Improved Road Experience and Travel Times:** The Project will generate some savings in vehicle operating costs from the upgraded highway, and some savings in travel times mostly from increases in safe vehicle speed caused by the increased lane capacity and easier overtaking conditions.

The potential adverse effects are summarised in the table below along with the proposed key mitigation measures and an assessment of the residual level of effects, assuming the mitigation measures are implemented:

Table 2 Summary of E&S Impacts and Mitigation Measures

Topic	Summary of Impacts	Summary of Key Mitigation/Management Measures	Residual Impact Significance
Environment			
Air Quality	<p>During Construction: Emissions of dust from working areas, access roads, stockpiles and during loading/unloading activities; emissions from batching plants; exhaust emissions from construction machinery; and emissions due to peaks in traffic movements, will result from the construction works.</p> <p>During operation: Emissions of particulates, exhaust gasses, volatile organic compounds, carbon monoxide and other hazardous air pollutants including benzene, will result over time from the increasing road traffic. However, the Project will generally move through-traffic farther from built-up areas and may reduce emissions levels in those areas.</p>	<p>Good maintenance of plant to reduce unnecessary emissions, and to remove and replace any heavily polluting plant. Standard construction measures to reduce dust (wetting down dusty areas, covering vehicles, etc.).</p> <p>None</p>	<p>During construction - Negative impacts of moderate significance reduced to low significance with effective contractor management.</p> <p>During operation - Negative impacts will be of low significance.</p>
Noise & Vibration	<p>During Construction: Increased noise levels will arise from construction plant and activities, especially if blasting and rock breaking is needed.</p> <p>During Operation: Noise levels will increase gradually over time with increased traffic flows and increased traffic speeds. In rural areas noise levels will be increased and some specific communities close to the proposed bypasses may be affected.</p>	<p>Management controls typical for construction work include informing local communities on the construction schedule, applying the legal limits to noise exposure periods of workers, and supplying operators of noisy machines with earmuffs.</p> <p>Specific stretches of the road – a total distance of around 8,500 m - may need noise barriers to be installed to reduce road noise on nearby houses. These locations will be finally identified before the Tender Documents are finalised. A noise monitoring programme may need to be enacted in the future at specific nearby settlements.</p>	<p>During construction - Negative impacts of low significance reduced farther with effective contractor management.</p> <p>During operation – negative impacts of medium significance at specific locations will be reduced to low significance by noise barriers.</p>
Biodiversity	<p>During Construction: Risks from the excavation of gravel and aggregate from the flood channels of the watercourses which may affect the flora and fauna on the side slopes and in the stream beds.</p> <p>During Operation: None</p>	<p>Contractor must only source aggregate from approved and licensed sources, and must not take informally from river beds in the Project area.</p>	<p>Negative impacts of medium significance reduced to low significance with effective contractor management.</p>
Protected Areas	<p>During Construction: The wetland habitats of the Garayazi Nature Sanctuary, Garayazi Forest IBA and Akstafa-chai Valley IBA - which all lie downstream from the Project - could be affected if the watercourses over which the road crosses were subject to significant pollution.</p> <p>During Operation: None</p>	<p>Various specific construction management control measures which place restrictions on the Contractor working in watercourses, and aiming to reduce the risk of spillage or contamination of the water.</p> <p>Emergency Response Plan for Spills</p>	<p>Negative impacts of medium significance reduced to low significance with effective contractor management.</p>

Topic	Summary of Impacts	Summary of Key Mitigation/Management Measures	Residual Impact Significance
Water Resources	<p>During Construction: There is a risk of increased sedimentation and pollution in the watercourses during construction activities in the watercourses, particularly for bridge works.</p> <p>During Operation: A very slight risk of watercourse contamination in the result of a major oil or chemical spill close to one of the river crossings.</p>	<p>Various construction management control measures which place restrictions on the Contractor working in watercourses to reduce spillage, as outlined in the Watercourse Management Plan included as part of the Construction Environmental and Social Management Plan (CESMP).</p> <p>Emergency Response Plan</p>	<p>Negative impacts of medium significance reduced to low significance with contractor management controls.</p> <p>Negative impacts during operation are of low significance</p>
Landscape & Visual	<p>During Construction: Some minor, temporary visual impacts may arise from the dust generated during construction.</p> <p>During Construction and Operation: No landscape impacts will result from the sections for the existing road is widened. The bypass sections are largely through flat cultivated lands with no landscape value, and have no landscape impact.</p>	<p>Standard construction measures to reduce dust (wetting down dusty areas, covering vehicles, etc.).</p>	<p>Impacts of low significance.</p>
Soils and Geology	<p>During Construction & Operation: Any major spillages – e.g. of oil or fuel - during construction or operation of the road Project could cause contamination of the soil and groundwater in the area. However, the risk of significant effects is low, and any effects would likely be confined to the local area.</p>	<p>Various construction management control measures to reduce spillage, outlined in Construction Environmental and Social Management Plan (CESMP).</p> <p>Emergency Response Plan</p>	<p>Negative impacts of medium significance reduced to low significance with contractor management controls.</p>
Social			
Local Communities	<p>During Construction: The local communities along the route and the existing road will be subject to nuisance effects from the construction, including noise, dust and a general reduction in amenity of the local area during the construction period.</p> <p>During Construction and Operation: The limitations on access to some land areas (even if short-term) during construction may affect some residents of the local villages. Those on low incomes with a particular dependency on agriculture may face some temporary difficulties.</p>	<p>Nuisance effects will be short-term and readily manageable by good construction management and controls, including planned sequencing of the works, and careful engagement with the local communities by the Contractor.</p> <p>Any temporary worker accommodation should be sited so as to minimise disturbance to local communities. Any temporary land required by the Contractor should seek to minimise/avoid disturbance to local communities.</p>	<p>Negative risk of medium significance would reduce to low significance with adequate management controls.</p>
Employment & Livelihoods	<p>During Construction: The Project will require land acquisition predominantly of privately owned agricultural cultivated land, which will impact the livelihoods of those whose lands are affected. A small number of local small businesses (e.g. petrol stations, cafes/restaurants etc.) will also need to be removed, causing some loss of livelihood.</p> <p>During Operation: None</p>	<p>Application of the provisions of the Azerbaijan Expropriation Law 2010 and EBRD's requirements, will ensure that physical and economic resettlement are compensated for and appropriate assistance provided. A Resettlement Plan is being prepared setting out compensation entitlements to all eligible affected persons.</p>	<p>Negative risk of medium significance would reduce to low significance assuming implementation of all requirements of the 2010 Law.</p>
Land & Property	<p>The Project will require land acquisition predominantly of privately owned agricultural cultivated land and will cause some economic displacement from the loss of cultivated lands, and the loss of a few houses and local small businesses</p>	<p>Application of the provisions of the Azerbaijan Expropriation Law 2010 and EBRD's requirements, will ensure physical and economic resettlement are compensated for. A Resettlement Plan is being</p>	<p>Negative risk of medium significance would reduce to not</p>

Topic	Summary of Impacts	Summary of Key Mitigation/Management Measures	Residual Impact Significance
	(e.g. petrol stations, cafes/restaurants etc.).	prepared setting out compensation entitlements to all eligible affected persons.	significant assuming implementation of all requirements of the 2020 Law.
Access & Severance	<p>During Construction: The dualling of the existing road and the creation of the new bypass sections may result in some temporary restrictions of access by communities to their agricultural areas.</p> <p>During Operation: None - the design has provided adequate under/overpasses and local service roads to allow for continued local access.</p>	<p>Effective communication between the Contractor and local communities, and the careful sequencing of the works to ensure all areas remain accessible during construction.</p> <p>A Traffic Management Plan will ensure careful sequencing of the works to minimise disturbance.</p>	Negative risk of medium significance of a short-term nature would reduce to low significance with adequate management control
Cultural Heritage	During Construction: Risks to graves, known monuments (e.g. at the Shamkir River Bridge) and hitherto unknown cultural heritage sites from excavations along the road corridor.	<p>Chance Finds Procedure.</p> <p>Coordination with local authorities and Academy of Sciences</p>	Risk is of low significance
Community Health, Safety and Security (CHSS)	<p>During Construction: The construction process may increase the risk of accidents, largely through the movement of plant and machinery and the delivery of materials. There is also a risk of influx from workers from outside the area which may give rise to certain risks to the communities. The public will not be allowed to access the construction work sites.</p> <p>During Operation: There are a few locations where bypasses will run close to communities and may increase the risk of people trying to cross the new dual-carriageway at these locations.</p>	<p>Good workforce management, implementation & enforcement of code of conduct, provision of health surveillance & healthcare access for workers, appropriate siting of any Workforce Accommodation and good community engagement mechanisms along with a grievance process etc. Good site management, security, health & safety measures, warning signs etc. applied by the Contractor to minimise risks to an acceptable level</p> <p>A Road Safety Audit (RSA) will be conducted, which will review whether fencing should be implemented to reduce these risks at these specific locations. The RSA will also review whether additional safety measures should be included in the design. Road safety awareness raising initiatives to be undertaken with local communities prior to the opening of the road.</p>	<p>Negative impacts of medium significance reduced to low significance with contractor management controls.</p> <p>Negative impacts of medium significance of a short-term nature reduced to low significance by implementation of fencing recommendations of RSA.</p>
Labour & Workforce Issues	During Construction: The works will give rise to occupational, health and safety risks to workers, including those related to working with plant and machinery, working at height and working over water for the bridge sections.	Contractor's Health and Safety provisions, in accordance with the Specification.	Negative impacts of medium significance reduced to low significance with contractor management controls.

9. ENVIRONMENTAL & SOCIAL MANAGEMENT & MONITORING

Environmental and Social Management

Measures to manage the environmental and social effects of the Project are included in the Outline EMP which is included in the EIA. Additional detail on some of the mitigation measures will be developed by Azeravtoyol in the coming months, before the Project goes to tender. This will provide enough detail for all construction – related measures to be included in the Tender Documents. Measures relating to public engagement are detailed in the Stakeholder Engagement Plan (SEP), and those remaining actions and commitments relating to the land acquisition will be detailed in a Resettlement Plan (RP), which will be developed by Azeravtoyol. The key elements of the required mitigation measures have been summarised in the table above, and the additional steps which Azeravtoyol must take are described in the Environmental and Social Action Plan (ESAP).

The Contractor will then develop a Construction Environmental and Social Management Plan (CESMP), to identify how the commitments will be addressed during Construction. This will draw together all the management requirements to minimise disturbance to environmental and social receptors during construction. An Operational Environmental and Social Management Plan (OESMP) will be produced to address how by Azeravtoyol will implement any mitigation and monitoring actions which need to continue during road operation.

Environmental and Social Monitoring

The CESMP will include some monitoring actions. During both construction and operation, certain activities, indicators and environmental and social resources will be monitored. **Pre-Construction** monitoring will include levels of noise and air quality at representative road side receptors. Monitoring **during construction** will include water quality in the watercourses (when relevant), as well as on temporary land take, and indicators of problems from influx of workforce into the area. Operations phase monitoring has yet to be specified, but will likely include levels of noise and air quality at representative road side receptors, for a period of 2 years post-construction.

Monitoring and management actions for the stakeholder engagement and the land & resettlement planning are proposed in the SEP and RP. There will also be an ongoing requirement for Azeravtoyol and (during construction) the Contractor to monitor stakeholder, individuals and community grievances and take appropriate management action should trends be identified or key issues occur.

Monitoring reports will be required from the Contractor during the construction which will be inspected by the relevant authorities and Azeravtoyol's Supervising Engineer for the works.

10. FURTHER INFORMATION & CONTACT DETAILS

Project preparation documents are available on the Azeravtoyol website (<http://www.azeravtoyol.gov.az/az>) and the EBRD website when completed (<http://www.ebrd.com/home>).

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Annex 1: Maps Showing Detailed Project Alignment

Figure 3 Project Route – Chainage 0+000 km to 30+800 km

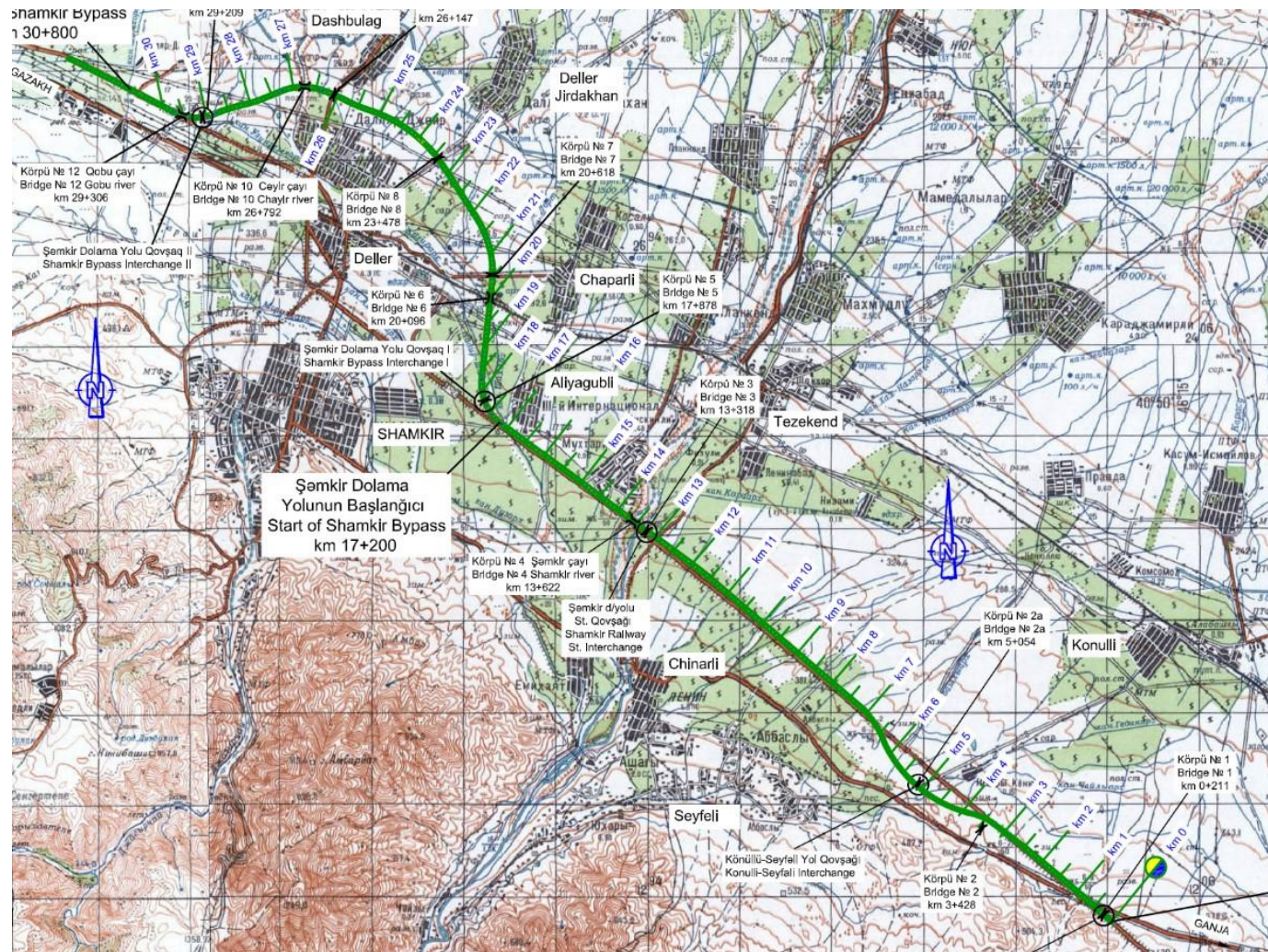


Figure 4 Project Route - Chainage 30+800 km to 59+300 km

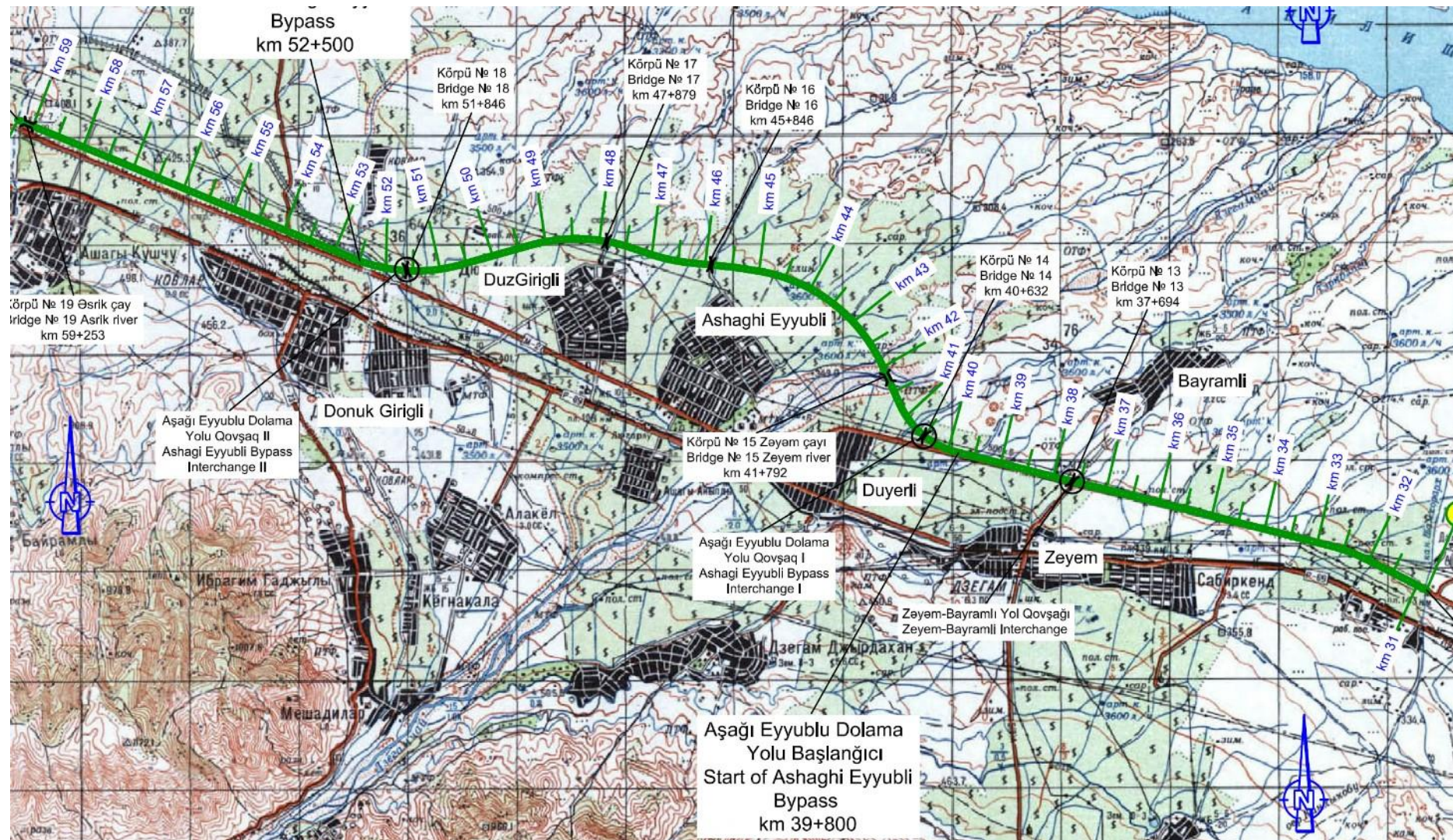


Figure 5 Project Route – Chainage 59+300 km to 82+000 km

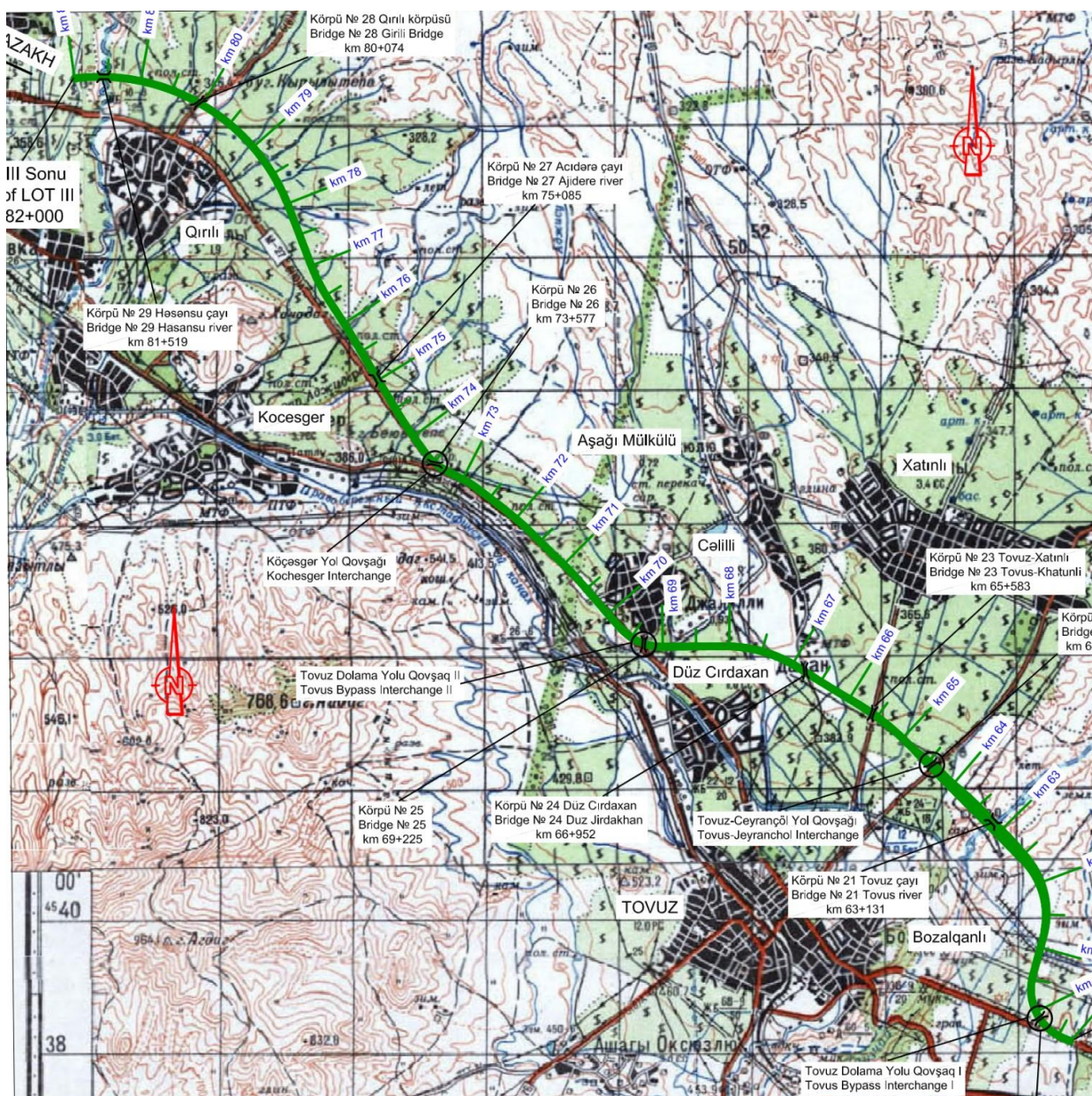


Figure 6 Project Route – Chainage 82+000 km to 102+100 km

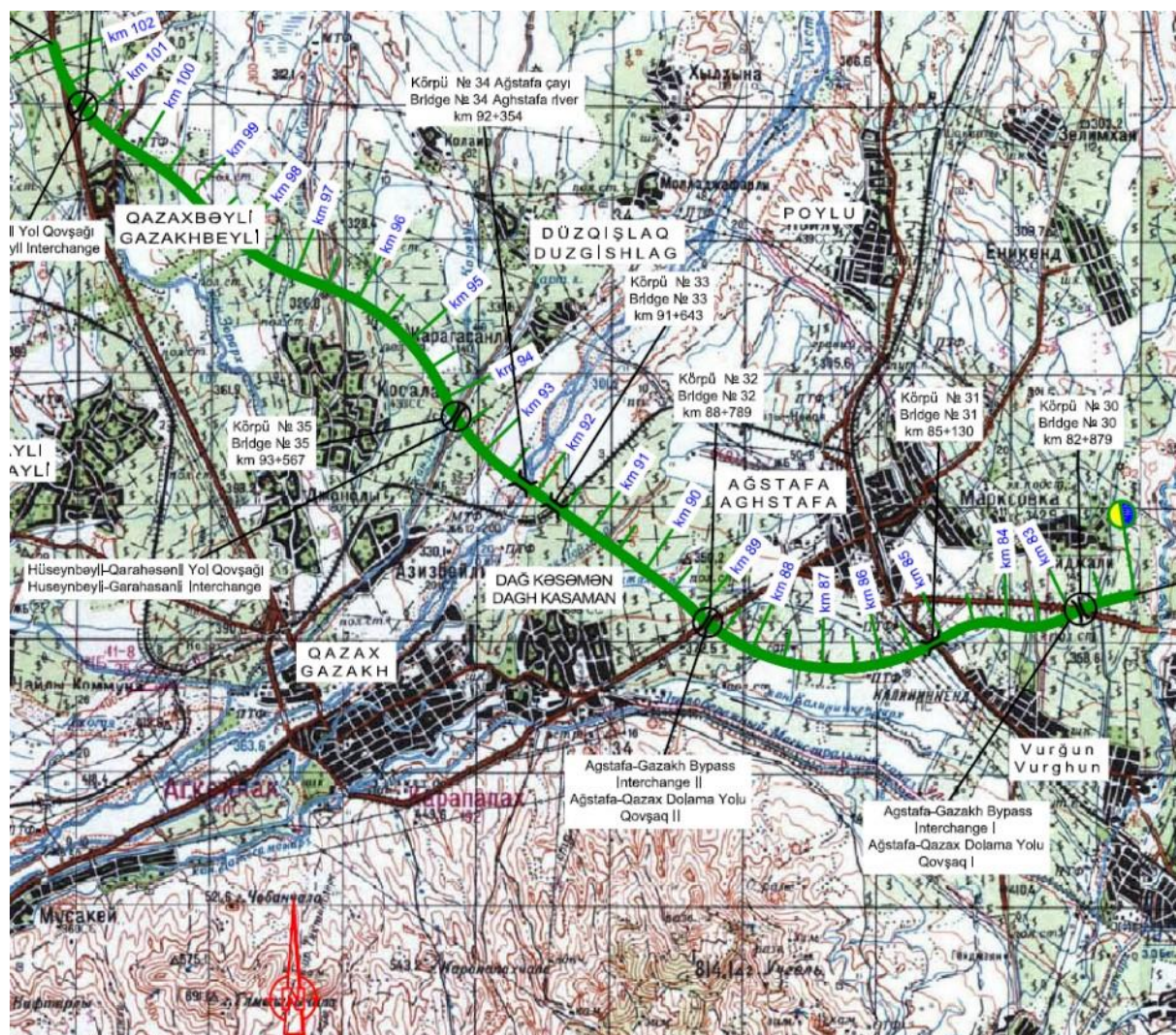


Figure 7 Project Route – Chainage 102+100 km to 118+000 km



Figure 8 Project Route – Chainage 118+000 km to 130+150 km

